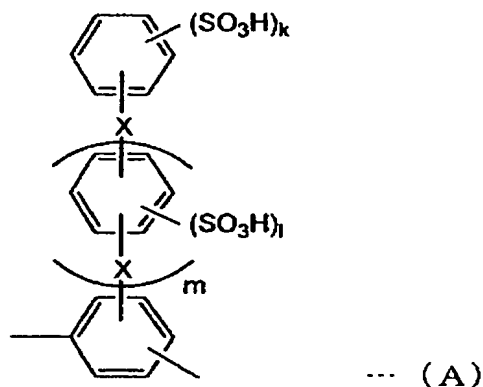


**WHAT IS CLAIMED IS:**

1. A membrane-electrode assembly for direct methanol type fuel cell comprising a negative electrode and a positive electrode assembled via a proton conductive membrane, the negative electrode being provided with a negative electrode-side separator having a mechanism for feeding a methanol aqueous solution as a fuel, the positive electrode being provided with a positive electrode-side separator having a mechanism for feeding an oxidizing agent gas, and the proton conductive membrane comprising a polymer containing 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (A):

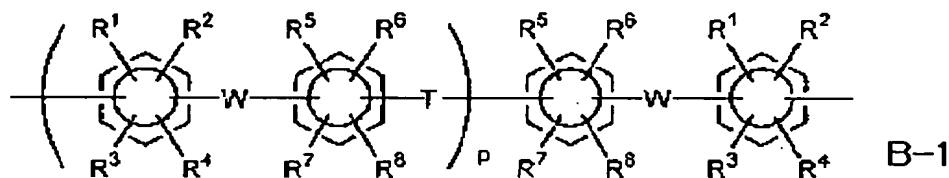


wherein X represents a single bond (—) or an electron withdrawing group or electron donating group; m represents an integer of 0-10; when m is 1-10, Xs may be the same or different; k represents an integer of 0-5; l represents an integer of 0-4; and  $(k + l) \geq 1$ , and 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (B):

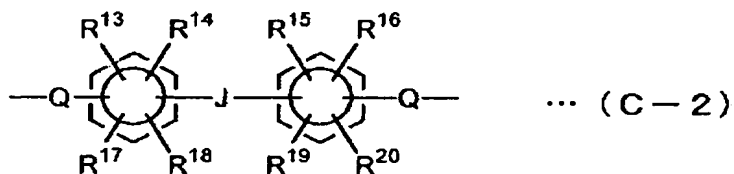
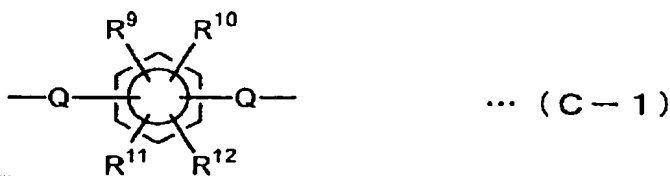


wherein Y represents a hydrophobic divalent flexural group.

2. The membrane-electrode assembly as claimed in claim 1, wherein Y in the formula (B) is a structure represented by the following formula (B-1) or (B-2):



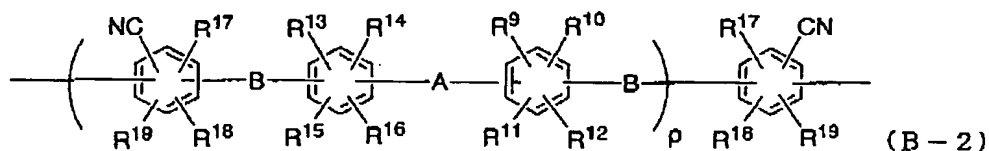
wherein  $R^1$  to  $R^8$  may be the same or different and each represents at least one atom or group selected from the group consisting of a hydrogen atom, a fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; W represents a divalent electron withdrawing group; T represents at least one group selected from divalent groups represented by the following general formula (C-1) or (C-2):



wherein  $R^9$  to  $R^{20}$  may be the same or different and each represents at least one atom or group selected from the group consisting of a hydrogen atom, a fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; Q represents a divalent electron donating group; and J represents at least one

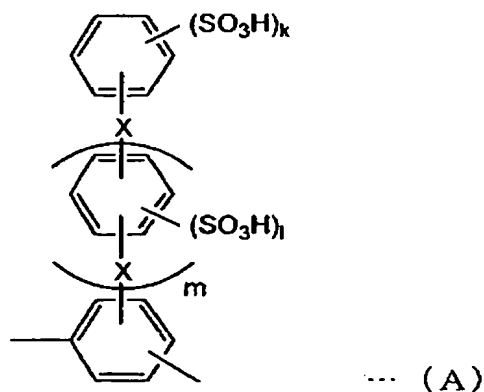
atom or group selected from the group consisting of an alkylene group, a fluorine-containing alkylene group, an aryl-substituted alkylene group, an alkenylene group, an alkynylene group, an arylene group, a fluorenylidene group, -O-, -S-, -CO-, -CONH-, -COO-, -SO-, and -SO<sub>2</sub>-; and

p represents 0 or a positive integer;



wherein R<sup>9</sup> to R<sup>19</sup> may be the same or different and each represents at least one atom or group selected from the group consisting of hydrogen atom, fluorine atom, an alkyl group, a fluorine-substituted alkyl group, an allyl group, an aryl group, and a cyano group; A represents a single bond or a divalent electron withdrawing group; B represents a divalent donating group; and p represents 0 or a positive integer.

3. A proton conductive membrane for direct methanol type fuel cell comprising a polymer containing 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (A):



wherein X represents a single bond (-) or an electron withdrawing group or electron

donating group;  $\underline{m}$  represents an integer of 0-10; when  $\underline{m}$  is 1-10, Xs may be the same or different;  $\underline{k}$  represents an integer of 0-5;  $\underline{l}$  represents an integer of 0-4; and  $(k + l) \geq 1$ , and 0.05-99.95 mol% of a repeating constitutional unit represented by the following general formula (B):



wherein Y represents a hydrophobic divalent flexural group.